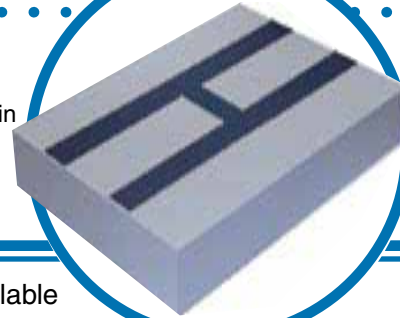


High Frequency Surface Mount Attenuators

RFAxx Series

- High power chip attenuators
- Low return loss, long life and temperature stability resulting from Ni-Cr thin film and heat conductive ceramic substrates
- Industrial RF power sources, RF Amplifiers, radio and fixed transmitter or mobile systems, and measurements



The RFAxx series of 50 ohm high frequency attenuators are available in a variety of sizes and termination styles to suit applications for mounting on heat sinks or normal PC board materials. High thermal conductivity aluminum nitride substrates provide the low resistance thermal path for high power dissipation applications. The RFAxx series is available with power dissipation to 30 watts when mounted to a heat sink. Frequency performance up to 4 GHz assures proper operation in RF and microwave power amplifiers, RF transmitters and receivers and RF power sources.

Electrical Data

Model	RFA53SD	RFA54SD	RFA54DD	RFA55SD	RFA55DD
Frequency Range	DC to 4GHz	DC to 4GHz	DC to 4GHz	DC to 4GHz	DC to 4GHz
Power Rating @ 70°C	0.25W	0.25W	0.25W	0.25W	0.25W
Attenuation ¹	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40 dB				
Impedance	50 ±2%				
Absolute TCR	±50ppm/C°				

Model	RFA84SD	RFA84DD	RFA37SD	RFA37DD	RFA68DD
Frequency Range	DC to 1GHz	DC to 1GHz	DC to 1GHz	DC to 1GHz	DC to 1GHz
Power Rating @ 70°C	0.50W	0.50W	1.0W	1.0W	30W ²
Attenuation ¹	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40 dB				10, 20, 30dB
Impedance	50 ±2%				
Absolute TCR	±50ppm/C°				

Notes: 1. Attenuations tolerances as follows: 1, 2, 3, 4, 5, 6dB: ±0.2dB 7, 8, 9, 10dB: ±0.3dB 20, 30, 40dB: ±0.4dB
2. RFA58DD rating of 30W with chip attached to proper heatsink.

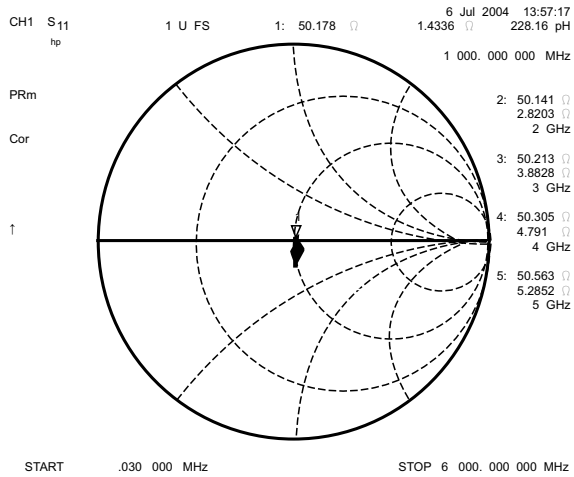
General Note

IRC reserves the right to make changes in product specification without notice or liability. All information is subject to IRC's own data and is considered accurate at time of going to print.

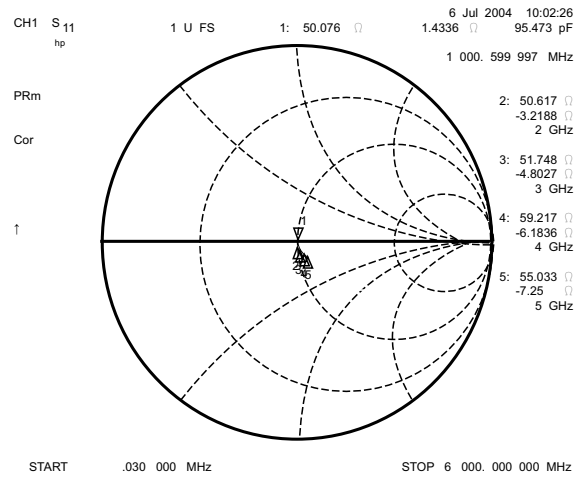
High Frequency Surface Mount Attenuators

Surface Mount RF Power Attenuators

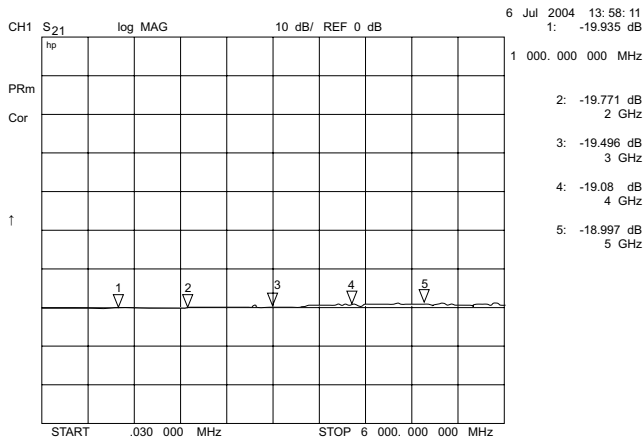
RFA55DD20dB Impedance



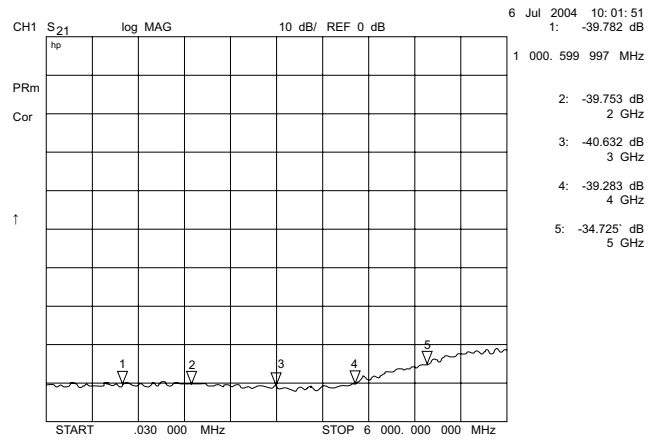
RFA55DD40dB Impedance



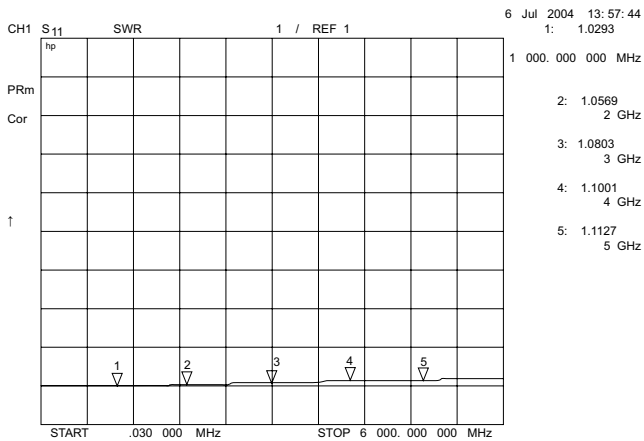
RFA55DD20dB Attenuation



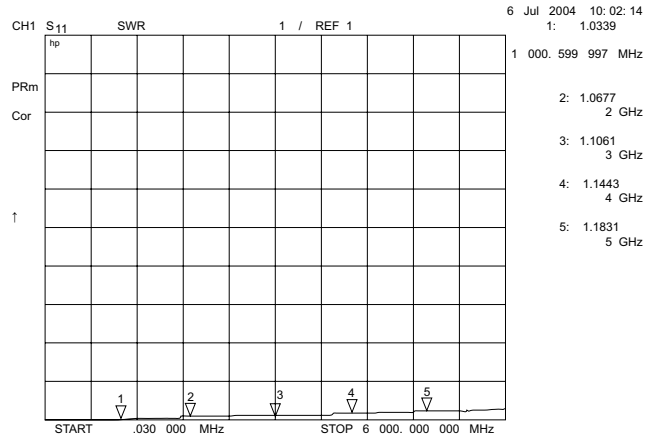
RFA55DD40dB Attenuation



RFA55DD20dB VSWR

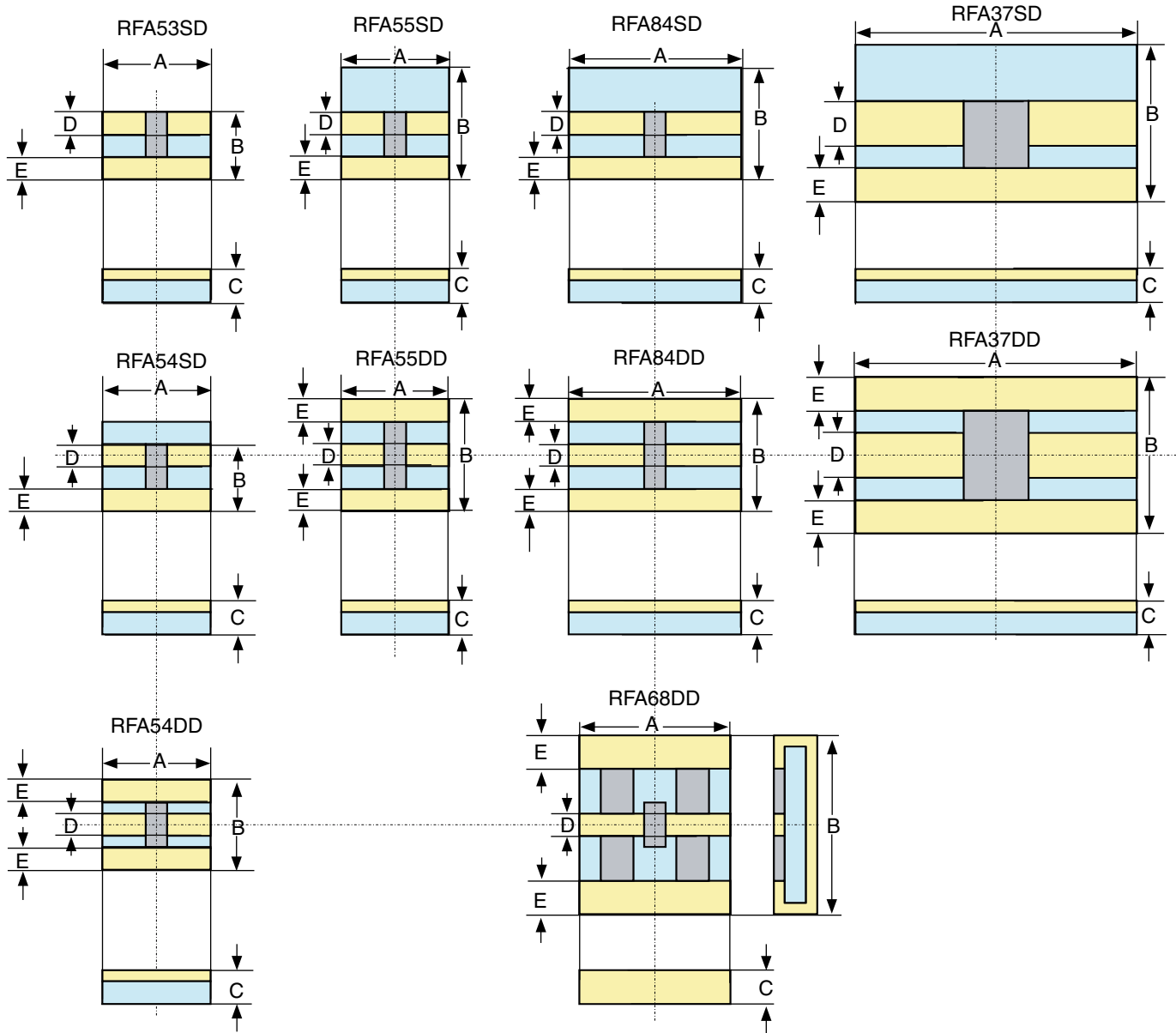


RFA55DD40dB VSWR



High Frequency Surface Mount Attenuators

Physical Data



Type	RFA53SD	RFA54SD	RFA54DD	RFA55SD	RFA55D	RFA84SD	RFA84DD	RFA68DD	RFA37SD	RFA37DD
A	5.00	5.00	5.00	5.00	5.00	8.00	8.00	6.70	13.00	13.00
B	2.70	3.80	3.80	4.50	4.50	5.25	5.25	8.65	7.00	7.00
C	0.70	0.70	0.70	0.70	0.70	0.70	0.70	1.05	0.70	0.70
D	1.20	1.20	1.20	1.20	1.20	1.40	1.40	1.00	2.00	2.00
E	0.80	0.80	0.80	1.00	1.00	1.10	1.10	0.80	1.40	1.40

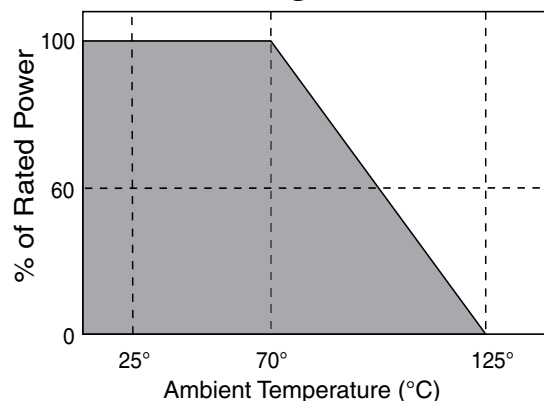
Note: All dimensions are in mm.

High Frequency Surface Mount Attenuators

Environmental Data

	Test Condition	To meet
Load Life	1000 Hours, 70°C	±1.0%
Moisture Load Life	1000 Hours, 40°C 95% RH	±1.0%
Solder Heat Resistance	350°C, 3 sec.	±1.0%
Solderability	235°C, 3 sec.	>95% coverage

Power Derating Curve



Ordering Data

Prefix **HFR** - **RFA53SD** - **10dB** **G** **Z00**

Model

RFA53SD; RFA54SD; RFA54DD; RFA55SD; RFA55DD;
RFA84SD; RFA84DD; RFA68DD; RFA37SD; RFA37DD

Attenuation

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 20, 30, 40dB

Impedance Tolerance

G = ±2%

Packaging

Z00 = 100 pcs/bulk package